

What is claimed is:

1. A method of setting an environment for a portable data storage device that has an interface for interfacing with a host computer thereby enabling a mutual data transmission with the host computer, the method comprising:

assigning one or more environment setting command code in a reserve code area that is not in use, the mutual data transmission between the portable data storage device and the computer being performed by exchange of a command frame via the interface, the command frame having an operation code area and an operand area;

determining whether a code contained in the operation code area of the command frame received from the computer is one of the one or more environment setting command code; and

if the code contained in the operation code area of the command frame is one of the one or more environment setting command code, updating environment setting data stored in the portable data storage device with the environment setting data contained in the operand area of the command frame.

2. The method of claim 1, wherein:

the environment setting command code comprises a time setting command code, and the environment setting data comprises time data representing a current time.

3. The method of claim 2, wherein the time data is standard time data downloaded to the computer from a time server.

4. The method of claim 2, wherein said portable data storage device comprises a digital video camcorder, said method further comprising:

recording the time data in a time recording sector of a magnetic tape during operation of the digital video camcorder.

5. A method of recording time on a digital video camcorder that interfaces with a computer to enable mutual data transmission with the computer, the method comprising:

assigning a time setting command code to at least one code in a reserve area of a communication protocol;

receiving an operation code area and an operand area in a command frame of the communication protocol from the computer, the operation code area containing the time setting command code, and the operand area containing time data corresponding to the time setting command code;

counting current time in the digital video camcorder based on the time data contained

in the operand area; and

recording the current time on a predetermined part of a magnetic tape during a recording operation of the digital video camcorder.

6. The method of claim 5, wherein the time data is standard time data downloaded via the Internet to the computer from a time server that provides the standard time.

7. A digital video camcorder, comprising:

an interface for communicating with an external host computer;

a microcomputer configured to count a current time based on time data transmitted from the external host computer; and

a head for recording audio/video data on a magnetic tape, said head recording the current time on a predetermined part of the magnetic tape.

8. The digital video camcorder of claim 7, further comprising:

a storage portion for storing the time data.

9. The digital video camcorder of claim 7, wherein the time data is standard time data downloaded via the Internet to the computer from a time server that provides the standard time.

10. A method of setting an environment for a digital video camcorder from a computer, the method comprising:

providing an interface which exchanges data with the computer via a data protocol having at least one reserved code area not normally used in the protocol;

assigning an environment setting command code to the reserved code area;

receiving a command frame from the computer via said interface, said command frame comprising an operand area;

determining if the command frame provides the environment setting command code;

and

if the command frame provides the environment setting command code, updating the environment of the digital video camcorder according to data contained in the operand area.

11. The method of claim 10, wherein the data protocol is an IEEE-1394 protocol.

12. A method of providing a time reference for a digital video camcorder, comprising:

providing an interface which exchanges data between the digital video camcorder and a computer using a predetermined communications protocol;

transmitting an updated time and a time set command from the computer to the digital video camcorder in a command frame of the communications protocol;

storing the updated time in the digital video camcorder in response to the time set command; and

counting time within the digital video camcorder beginning with the stored updated time.

13. The method of claim 12, wherein the data protocol is an IEEE-1394 protocol.

14. The method of claim 12, wherein the method further comprises:

providing an internet connection between the computer and a time server; and  
securing the updated time from the time server.

15. A digital video camcorder, comprising:

a camera which senses audio and visual information and converts the audio and visual information to first digital data;

a microcomputer which controls the digital video camera;

an interface which communicates second digital data from an external computer to the microcomputer, the second digital data comprising at least one command for setting an environment parameter of the digital video camcorder and an associated value for the at least one environment parameter; and

a non-volatile memory which stores the communicated associated value, wherein the microcomputer controls the digital camera based on the communicated associated value.

16. The digital video camcorder of claim 15, wherein:

the microcomputer generates third digital data based on the communicated associated value; and

the digital video camcorder further comprises a head which records the first digital data and the third digital data on respective predetermined areas of a recording medium.

17. The digital video camcorder of claim 15, wherein:

the communicated associated value is time data;

the microcomputer counts a current time based on the time data; and

the digital camcorder further comprises a head which records the first digital data and the time data on respective predetermined areas of a recording medium.

18. The digital video camcorder of claim 16, wherein the at least one command for setting an environment parameter of the digital video camcorder and the associated value for the at least one environment parameter are communicated in a reserved area of a command frame of a predetermined communications protocol.

19. The digital video camcorder of claim 18, wherein the predetermined communications protocol is an IEEE-1394 protocol.

20. The digital video camcorder of claim 18, wherein the predetermined communications protocol is an RS-232 protocol.

21. The digital video camcorder of claim 18, wherein the predetermined communications protocol is an USB protocol.

22. The digital video camcorder of claim 18, wherein the predetermined communications protocol is a wireless communications protocol.

23. A computer readable medium which instructs a computer to interface with a digital video camcorder to enable mutual data transmission between the computer and the digital camcorder, the medium comprising one or more instructions for:

- causing the computer to generate a command frame comprising a command code assigned to at least one area of codes of a communication protocol and an environment value relating to an operation of the digital video camcorder to an operand area of the command frame;

- causing the computer to send the command frame to the digital video camcorder;

- causing the computer to determine whether the digital video camcorder has correctly received the command frame based on a transmission of a response frame from the digital video camcorder; and

- causing the computer to retransmit the command frame if the command frame is not correctly received by the digital video camcorder.

24. The computer readable medium of claim 23, further comprising one or more instructions for:

- causing the computer to acquire time data from a time server via an internet

connection; and

causing the computer to format the time data for transmission in the operand area of the command frame.

25. A method of communicating instructions for setting an environment value of a digital camcorder using a computer, the method comprising:

assigning a first command code which identifies the digital video camcorder;

assigning a second command code to at least one reserve code area of a communication protocol, the second command code identifying the environment value to be set;

assigning the environment value relating to the second command code;

transmitting a command frame from the computer to the digital video camcorder, said command frame comprising at least the first command code, the second command code and the environment value; and

setting the environment value based on the second command code and the environment value.

26. A method of updating an operational configuration setting of a portable data storage device from a host computer, the method comprising:

detecting a connection between said portable data storage device and said host computer;

transmitting from said host computer a command to update said operational configuration setting together with a update value of said operational configuration setting;

receiving by said portable data storage device said command and said update value;

and

storing within said portable data storage device said update value as a new value for said operational configuration setting.

27. The method in accordance with claim 26, further comprising:

upon detection of said connection, transmitting a request from said portable data storage device to said host computer for said update value of said operational configuration setting; and

upon receipt of said update value, transmitting from said portable data storage device to said host computer an acknowledgement message indicating safe receipt of said command and said update value.

28. The method in accordance with claim 26, wherein said step of transmitting said command and said update value comprises:

assigning a command code representing said command, said command code being selected from among normally unused ones of a plurality of codes available in a communication protocol being employed for communications between said portable device and said host computer;

assembling a command frame comprising a command code field and an operand field, said command code field containing said command code, and said operand field containing said update value; and

sending said command frame from said host computer to said portable data storage device using said communication protocol.

29. The method in accordance with claim 26, wherein said operational configuration setting comprises a current time setting, said method further comprising:

downloading by said host computer from a remote time server a standard time value.

30. The method in accordance with claim 29, wherein said step of transmitting said command and said update value comprises:

upon detection of said connection, automatically transmitting said command and said update value from said host computer to said portable data storage device without an intervention by a user of said portable data storage device.

31. A computer readable storage medium having stored thereon a set of instructions for implementing a method of updating an operational configuration setting of a portable data storage device from a host computer, said set of instructions comprising one or more instructions for:

detecting a connection between said portable data storage device and said host computer;

upon detection of said connection, transmitting from said host computer a command to update said operational configuration setting together with a update value of said operational configuration setting;

receiving from said portable data storage device by said host computer an acknowledgement message indicating safe receipt of said command and said update value.

32. The computer readable storage medium according to claim 31, wherein said one or more instructions for transmitting said command and said update value comprises one or more instructions for:

assigning a command code representing said command, said command code being selected from among normally unused ones of a plurality of codes available in a communication protocol being employed for communications between said portable device and said host computer;

assembling a command frame comprising a command code field and an operand field, said command code field containing said command code, and said operand field containing said update value; and

sending said command frame from said host computer to said portable data storage device using said communication protocol.

33. The computer readable storage medium according to claim 31, wherein:  
said operational configuration setting comprises a current time setting of said portable data storage device.

34. The computer readable storage medium according to claim 33, wherein said set of instructions further comprises one or more instructions for:  
downloading by said host computer from a remote time server a standard time value.

35. The computer readable storage medium according to claim 33, wherein said one or more instructions for transmitting said command and said update value comprises one or more instructions for:

upon detection of said connection, automatically transmitting said command and said update value from said host computer to said portable data storage device without an intervention by a user of said portable data storage device.

36. A portable data storage device, comprising:  
a memory for storing operational configuration setting of said portable data storage device;

an interface for connecting to and communicating with a host computer using a predetermined communications protocol, and for receiving from said host computer a command to update said operational configuration setting together with a update value of said operational configuration setting; and

a microcomputer configured to control said memory and said interface to, upon receipt of said command and said update value, cause said received update value to be stored in said memory as a new value for said operational configuration setting.

37. The portable data storage device according to claim 36, wherein:  
said microcomputer is further configured, upon detection of said connection to said host computer, to transmit to said host computer a request for said update value of said operational configuration setting, and, upon receipt of said update value, to transmit to said host computer an acknowledgement message indicating safe receipt of said command and said update value.

38. The portable data storage device according to claim 36, wherein:  
said microcomputer is further configured to decode said received command and said received update value, said command being received as a command frame, said command frame comprising a command code field and an operand field, said command code field containing a command code representing said command, and said operand field containing said update value, said command code being selected from among normally unused ones of a plurality of codes available in a communication protocol being employed for communications between said portable device and said host computer.

39. The portable data storage device according to claim 36, wherein:  
said operational configuration setting comprises a current time setting.

40. The portable data storage device according to claim 36, wherein:  
said portable data storage device comprises a digital video camcorder.

41. The portable data storage device according to claim 36, wherein:  
said portable data storage device comprises a personal digital assistant.

42. The portable data storage device according to claim 36, wherein:  
said portable data storage device comprises a portable music player.

43. The portable data storage device according to claim 36, wherein:  
said predetermined communications protocol is an IEEE-1394 protocol.

44. The portable data storage device according to claim 36, wherein:  
said predetermined communications protocol is an RS-232 protocol.

45. The portable data storage device according to claim 36, wherein:  
said predetermined communications protocol is a USB protocol.



46. The portable data storage device according to claim 36, wherein:  
said predetermined communications protocol is a wireless communications protocol.

47. The portable data storage device according to claim 36, wherein:  
said memory is a non-volatile memory.

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